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EXAMINER	
NGUYEN, BINH QUOC	
ART UNIT	**PAPER NUMBER**
2664	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/937,949	SEBIRE ET AL.	
	Examiner	Art Unit	
	Binh Q. Nguyen	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08/05/2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *43-84* is/are pending in the application.

4a) Of the above claim(s) *1-42* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *43-84* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/10/01, 7/22/04, and* 04/13/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

Content of Specification

1. (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

(e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

(f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

(k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the

international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

(l) Sequence Listing, See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Objections

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Regarding to claims 43, 60-63, 77-78: The term *"capable"* recites in those claims, which are not clear, therefor any term after *"capable"* will not be considered (Objection as not positively reciting that first station actually communicates in according with the recited claim features). Examiner suggests changing the term *"capable"* in those claims. Appropriate correction is required.

Regarding to claims 43: Objection suggest use line 6, delete "the allocation to that" and insert "--an allocation to the first mode full rate--"; Objection suggest use line 9, delete "the allocation to each of those" and insert "--an allocation to each of the second mode half rate--"; Objection suggest use line 6, delete " the allocation to each of those" and insert "--an allocation to each of the third mode quarter rate --".

Regarding to claims 44: Objection suggest use line 3, delete "the allocation to that" and insert "--an allocation to the fourth mode full rate--"; Objection suggest use line 6, delete "the allocation to each of those" and insert "--an allocation to each of the fifth mode half rate--".

Regarding to claims 46, and 65: Objection suggest use line 2, delete "communications are allocated" and insert "--communication and half are allocated --".

Regarding to claims 47, and 66: Objection suggest use line 2, delete "communications are allocated" and insert "--communication and a quarter are allocated --".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 43-84** are rejected under 35 U.S.C. 102 (b) as being anticipated by ***Dent*** (US Patent No. 6,084,865).

Regarding to claim 43: ***Dent*** teaches a telecommunications system comprising a first station capable of communication with a second station over a wireless channel *(see col. 1, lines 9-16)*, data being carried over the wireless channel in superframes *(see Fig. 2)*, each superframe comprising a plurality of frames *(see col. 5, lines 9-49)* and each frame comprising a plurality of timeslots *(see col. 12, lines 14-25)*; the system having:

a first mode of operation in which a full rate data channel for circuit switched communications *(see Fig. 11, col. 19, lines 58-66, PSTN means circuit switched communications)* is defined by

the allocation to that data channel *(see col. 2, lines 8-27)* of corresponding time slots in each frame *(see col. 18, lines 44-60)*;

a second mode of operation in which two half rate data channels for circuit switched communications are defined by the allocation to each of those data channels *(see col. 2, lines 8-27)* of an equal number of corresponding time slots of frames in each superframe *(see col. 1, lines 53-61, col. 18, lines 44-60)*; and

a third mode of operation in which four quarter rate data channels for circuit switched communications are defined by the allocation to each of those data channels *(see col. 2, lines 8-27)* of an equal number of corresponding time slots of frames in each superframe *(see col. 6, lines 38-65, "when factor is 4, frame-length/slot is 32 means quarter rate ¼" and col. 15, line 53-to-col. 16, line 7)*.

Regarding to claim 44. ***Dent*** teaches a communication system as claimed in claim 43, further comprising:

a fourth mode of operation in which a full rate data channel for packet switched communication *(see Fig. 9 &15 for packet switched communication, col. 2, lines 8-27 " voice or data signal": when voice for circuit switched and data for packet switched, col. 19, lines 58-66, and col. 21, lines 19-44: "PCM is Pulse Code Modulation-the most common method of encoding an analog voice signal into a digital bit stream, the voice signal can then be switched, transmitted and stored digitally. A frame is a packet". Those terms are defined by Newton's Telecom Dictionary 19th)* is defined by the allocation to that data channel of corresponding time slots in each frame *(see col. 18, lines 44-60)*;

a fifth mode of operation in which two half rate data channels for packet switched communications are defined by the allocation to each of those data channels *(see col. 2, lines 8-27)* of an equal number of corresponding time slots of frames in each superframe *(see col. 18, lines 44-60)*.

Regarding to claim 45. ***Dent*** teaches a communication system as claimed in claim 43, wherein equal numbers of timeslots in each frame are allocated to the data channel *(see col. 2, lines 8-27)* for circuit switched communications and the data channel for packet switched communications *(see col. 1, lines 53-61)*.

Regarding to claim 46. ***Dent*** teaches a communication system as claimed in claim 43, wherein half the number of slots that are allocated to the data channel for packet: switched communications are allocated to the data channel for circuit switched communications *(see col. 1, lines 53-61, col. 18, lines 44-60)*.

Regarding to claim 47. ***Dent*** teaches a communication system as claimed in claim 43, wherein a quarter of the number of slots that are allocated to the data channel *(see col. 2, lines 8-27)* for packet switched communications are allocated to the data channel for circuit switched communications *(see col. 6, lines 38-65, "when factor is 4, frame-length/slot is 32 means quarter rate ¼" and col. 15, line 53-to-col. 16, line 7)*.

Regarding to claim 48. ***Dent*** teaches a communication system as claimed in claim 43, wherein the data channel for circuit switched communications is a half rate data channel *(see col. 1, lines 53-61, col. 18, lines 44-60).*

Regarding to claim 49. ***Dent*** teaches a communication system as claimed in claim 43, wherein the data channel for circuit switched communications is a quarter rate data channel *(see col. 6, lines 38-65, "when factor is 4, frame-length/slot is 32 means quarter rate ¼" and col. 15, line 53-to-col. 16, line 7).*

Regarding to claim 50. ***Dent*** teaches a communication system as claimed in claim 43, wherein the data charnel for packet switched communications *(see Fig. 9 &15 for packet switched communication, col. 2, lines 8-27 " voice or data signal": when voice for circuit switched and data for packet switched, col. 19, lines 58-66, and col. 21, lines 19-44: "PCM is Pulse Code Modulation-the most common method of encoding an analog voice signal into a digital bit stream, the voice signal can then be switched, transmitted and stored digitally. A frame means a packet" are defined by Newton's Telecom Dictionary 19th)* is a half rate data channel *(see col. 1, lines 53-61, col. 18, lines 44-60).*

Regarding to claim 51. ***Dent*** teaches a communication system as claimed in claim 43, wherein control data for control of the data channel for packet switched communications is carried by the data channel for circuit switched communications *(see col.9, lines 1-16, and col. 19, lines 58-66).*

Regarding to claim 52. ***Dent*** teaches a communication system as claimed in claim 51, wherein the control data is for control of transmission power and/or handover of the channel, link adaptation *(see col. 17, lines 3-16)*.

Regarding to claim 53. ***Dent*** teaches a communication system as claimed in claim 51, wherein the control data comprises a fast associated control channel and/or a slow associated control channel *(see col. 5, lines 10-49)*.

Regarding to claim 54. ***Dent*** teaches a communication system as claimed in claim 43, wherein the data channel for circuit switched communications is a conversational channel *(see col. 5, lines 10-49, col. 14, lines 18-29, and col. 18, line 18-34)*.

Regarding to claim 55. ***Dent*** teaches a communication system as claimed in claim 43, wherein the data channel for circuit switched communications is a background channel *(see col. 8, line 40-to-col. 9, line 16, and col. 12, lines 26-54)*.

Regarding to claim 56. ***Dent*** teaches a communication system as claimed in claim 43, wherein the data channel for packet switched communications is allocated time slots during periods *(see col. 2, lines 8-27)* when the data channel for circuit switched communications is relatively inactive *(see col. 22, line 65-to-col. 23, line 24)*.

Regarding to claim 57. ***Dent*** teaches a communication system as claimed in claim 56, wherein the data channel for packet switched communications is allocated time slots *(see col. 2, lines 8-27)* during lulls in speech data being carried by means of the data channel for circuit switched communications *(see col. 22, line 65-to-col. 23, line 24)*.

Regarding to claim 58. ***Dent*** teaches a communication system as claimed in claim 43, wherein the wireless channel *(see col. 2, lines 8-27)* comprises a circuit switched air-interface data being carried over said circuit switched air-interface *(see Fig. 11, col. 2, lines 8-27)* via circuit switched data and packet data *(see Fig. 9 &15 for packet switched communication, col. 2, lines 8-27 " voice or data signal": when voice for circuit switched and data for packet switched)*.

Regarding to claim 59. ***Dent*** teaches a communication system as claimed in claim 58, wherein said circuit switched air interface *(see Fig. 11, col. 2, lines 8-27)* is connectable to a packet switched core network *(see Fig. 9 &15 for packet switched communication, col. 2, lines 8-27 " voice or data signal": when voice for circuit switched and data for packet switched, col. 19, lines 58-66, and col. 21, lines 19-44: "PCM is Pulse Code Modulation-the most common method of encoding an analog voice signal into a digital bit stream, the voice signal can then be switched, transmitted and stored digitally. A frame is a packet")*.

Regarding to claim 60. ***Dent*** teaches a communication system as claimed in claim 43, wherein the circuit switched channel is capable of operation via a circuit switched core network

of the communication system *(see Fig. 11, col. 19, lines 58-66, PSTN means circuit switched communications)*.

Regarding to claim 61. ***Dent*** teaches a communication system as claimed in claim 43, wherein the packet switched channel is capable of operation via a packet switched core network of the communication system *(see Fig. 9 &15 for packet switched communication, col. 2, lines 8-27 " voice or data signal": when voice for circuit switched and data for packet switched, col. 19, lines 58-66, and col. 21, lines 19-44)*.

Regarding to claim 62. ***Dent*** teaches a communication system as claimed in claim 43, wherein the circuit switched channel *(see Fig. 11, col. 19, lines 58-66)* is capable of operation via a packet switched core network and a circuit switched core network of the communication system *(see Fig. 9 &15 for packet switched communication, col. 2, lines 8-27 " voice or data signal": when voice for circuit switched and data for packet switched, col. 19, lines 58-66, and col. 21, lines 19-44)*.

Regarding to claim 63: ***Dent*** teaches a communication system comprising a first station capable of communication with a second station over a wireless channel *(see col. 1, lines 9-16)*, data being carried over the wireless channel in superframes *(see Fig. 2)*, each superframe comprising a plurality of frames*(see col. 5, lines 9-49)* and each frame comprising a plurality of timeslots*(see col. 12, lines 14-25)*; the system having a mode of operation in which a data channel for circuit switched communications *(see Fig. 11, col. 19, lines 58-66, PSTN means circuit switched communications)* is defined by the allocation to that channel of corresponding time slots *(see col. 2, lines 8-27)* of some of the frames of each superframe, and a data channel for packet switched communications *(see Fig. 9 &15 for packet switched communication, col. 2,*

lines 8-27 " voice or data signal": when voice for circuit switched and data for packet switched, col. 19, lines 58-66, and col. 21, lines 19-44: "PCM is Pulse Code Modulation-the most common method of encoding an analog voice signal into a digital bit stream, the voice signal can then be switched, transmitted and stored digitally. A frame is a packet". Those terms are defined by Newton's Telecom Dictionary 19th) is defined by the allocation to that channel of corresponding time slots of some of the frames of each superframe *(see col. 2, lines 8-27,and col. 5, lines 9-49).*

Regarding to claim 64. ***Dent*** teaches a communication system as claimed in claim 63, wherein equal numbers of time slots in each frame are allocated to the data channel *(see col. 2, lines 8-27)* for circuit switched communications and the data channel for packet switched communications *(see col. 1, lines 53-61).*

Regarding to claim 65. ***Dent*** teaches a communication system as claimed in claim 63, wherein half the number of slots that are allocated to the data channel *(see col. 2, lines 8-27)* for packet switched communications are allocated to the data channel for circuit switched communications *(see col. 1, lines 53-61, col. 18, lines 44-60).*

Regarding to claim 66. ***Dent*** teaches a communication system as claimed in claim 63, wherein a quarter of the number of slots that are allocated to the data channel *(see col. 2, lines 8-27)* for packet switched communications are allocated to the data channel for circuit switched communications *(see col. 6, lines 38-65, "when factor is 4, frame-length/slot is 32 means quarter rate ¼" and col. 15, line 53-to-col. 16, line 7).*

Regarding to claim 67. ***Dent*** teaches a communication system as claimed in claim 63, wherein the data channel for circuit switched communications is a half rate data channel *(see col. 1, lines 53-61, col. 18, lines 44-60).*

Regarding to claim 68. ***Dent*** teaches a communication system as claimed in any of claim 63, wherein the data channel for circuit switched communications is a quarter rate data channel *(see col. 6, lines 38-65, "when factor is 4, frame-length/slot is 32 means quarter rate ¼" and col. 15, line 53-to-col. 16, line 7).*

Regarding to claim 69. ***Dent*** teaches a communication system as claimed in claim 63, wherein the data channel for packet switched communications is a half rate data channel *(see col. 1, lines 53-61, col. 18, lines 44-60).*

Regarding to claim 70. ***Dent*** teaches a communication system as claimed in claim 63, wherein control data for control of the data channel for packet switched communications is carried by the data channel for circuit switched communications *(see col. 5, line 10-49).*

Regarding to claim 71. ***Dent*** teaches a communication system as claimed in claim 63, wherein the control data is for control of transmission power and/or handover of the channel *(see col. 17, lines 3-16).*

Regarding to claim 72. ***Dent*** teaches a communication system as claimed in claim 70, wherein the control data comprises a fast access control channel and/or a slow access control channel *(see col. 5, line 10-49).*

Regarding to claim 73. ***Dent*** teaches a communication system as claimed in claim 63, wherein the data channel for circuit switched communications is a conversational channel *(see col. 5, lines 10-49, col. 14, lines 18-29, and col. 18, line 18-34).*

Regarding to claim 74. ***Dent*** teaches a communication system as claimed in claim 63, wherein the data channel for circuit switched communications is a background channel *(see col. 8, line 40-to-col. 9, line 16, and col. 12, lines 26-54).*

Regarding to claim 75. ***Dent*** teaches a communication system as claimed in claim 63, wherein the data channel for packet switched communications is allocated time slots during periods when the data channel for circuit switched communications is relatively inactive *(see col. 22, line 65-to-col. 23, line 24)*.

Regarding to claim 76. ***Dent*** teaches a communication system as claimed in claim 75, wherein the data channel for packet switched communications is allocated time slots *(see col. 2, lines 8-27)* during lulls in speech data being carried by means of the data channel for circuit switched communications *(see col. 22, line 65-to-col. 23, line 24)*.

Regarding to claim 77. ***Dent*** teaches a communication system as claimed in claim 63, wherein the circuit switched channel is preferably capable of operation via a circuit switched core network of the communication system *(see Fig. 11, col. 19, lines 58-66, PSTN means circuit switched communications)*.

Regarding to claim 78. ***Dent*** teaches a communications system comprising a first station capable of communication with a second station over a wireless channel *(see col. 1, lines 9-16)*, data being carried over the wireless channel in superframes, each superframe comprising a plurality of frames *(see col. 5, lines 9-49)* and each frame comprising a plurality of timeslots *(see col. 12, lines 14-25)*; the system having:

a first mode of operation in which a full rate data channel for packet switched communications is defined by the allocation to that data channel *(see col. 2, lines 8-27)* of corresponding time slots in each frame *(see col. 18, lines 44-60)*;

a second mode of operation in which two half rate data channels for packet switched communications are defined by the allocation to each of those data channels *(see col. 2, lines 8-*

27) of an equal number of corresponding time slots of frames in each superframe *(see col. 1, lines 53-61, col. 18, lines 44-60).*

Regarding to claim 79. ***Dent*** teaches a communication system as claimed in claim 78, wherein the or each full or half rate data channel for packet switched communications is a streaming, interactive or background channel *(see col. 8, line 40-to-col. 9, line 16, and col. 12, lines 26-54).*

Regarding to claim 80. ***Dent*** teaches a communication system as claimed in claim 78, wherein the or each full, half or quarter rate data channel for circuit switched communications is a conversational channel *(see col. 5, lines 10-49, col. 14, lines 18-29, and col. 18, line 18-34).*

Regarding to claim 81. ***Dent*** teaches a communication system as claimed in claim 78, wherein said system has a mode of operation in which said wireless channel comprises first and second sub-channels;

said first sub-channel comprising a half rate data channel for circuit switched communication *(see col. 9, line 17-to-col. 10, line 26*; and

said second sub-channel comprises a half rate data channel for packet switched communication *(see col. 9, line 17-to-col. 10, line 26).*

Regarding to claim 82. ***Dent*** teaches a communication system as claimed in claim 78, wherein said system has a mode of operation in which said wireless channel comprises first, second, third and fourth sub-channels each comprising a quarter rate data channel for circuit switched communication *(see col. 6, lines 38-65, "when factor is 4, frame-length/slot is 32 means quarter rate ¼" and col. 15, line 53-to-col. 16, line 7).*

Regarding to claim 83. ***Dent*** teaches a communication system as claimed in claim 78, wherein said system has a mode of operation in which said wireless channel comprises first, second and third sub-channels *(see col. 9, line 17-to-col. 10, line 26)*;

said first sub-channel comprising a quarter rate data channel for circuit switched communication *(see col. 9, line 17-to-col. 10, line 26)*; said second sub-channel comprises a quarter rate data channel for circuit switched communication *(see col. 9, line 17-to-col. 10, line 26, and col. 6, lines 38-65, and col. 15, line 53-to-col. 16, line 7)*; and

said third sub-channel comprises a half rate data channel for packet switched communication *(see col. 1, lines 53-61, col. 18, lines 44-60)*.

Regarding to claim 84. ***Dent*** teaches a communication system according to claim 78, wherein said system has a mode of operation in which said wireless channel comprises first, second and third sub-channels;

said first sub-channel comprising a quarter rate data channel for circuit switched communication *(see col. 9, line 17-to-col. 10, line 26)*;

said second sub-channel comprises a quarter rate data channel for circuit switched communication *(see col. 9, line 17-to-col. 10, line 26, and col. 6, lines 38-65, and col. 15, line 53-to-col. 16, line 7)*; and

said third sub-channel comprises a half rate data channel for packet switched communication *(see col. 1, lines 53-61, col. 18, lines 44-60)*.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 44-47, and 63-66** are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Dent*** (US Patent No. 6,084,865) in view of ***Yung*** (US Patent No. 6,728,296).

Regarding to claims 44-47: ***Dent*** teaches a communication system as claimed in claim 43, further comprising:

a fourth mode of operation in which a full rate data channel for packet switched communication is defined by the allocation to that data channel of corresponding time slots in each frame *(see col. 18, lines 44-60)*;

a fifth mode of operation in which two half rate data channels for packet switched communications are defined by the allocation to each of those data channels *(see col. 2, lines 8-27)* of an equal number of corresponding time slots of frames in each superframe *(see col. 18, lines 44-60)*.

Dent **fails to teach** data channel for packet switched communication. **However,** ***Yung*** **teaches** a data channel for packet switched communications *(see col. 6, line 3-12)*. **It would have been obvious** to a person of ordinary skill in the art to modify ***Dent*** with ***Yung*** to enable transmitting

packet data throughout network. **The motivation** for this is provided more flexibility and more reliability of transmission.

Regarding to claims 63-66: ***Dent*** teaches a communication system comprising a first station capable of communication with a second station over a wireless channel *(see col. 1, lines 9-16)*, data being carried over the wireless channel in superframes *(see Fig. 2)*, each superframe comprising a plurality of frames*(see col. 5, lines 9-49)* and each frame comprising a plurality of timeslots*(see col. 12, lines 14-25)*;

the system having a mode of operation in which a data channel for circuit switched communications *(see Fig. 11, col. 19, lines 58-66, PSTN means circuit switched communications)* is defined by the allocation to that channel of corresponding time slots *(see col. 2, lines 8-27)* of some of the frames of each superframe, and a data channel for packet switched communications is defined by the allocation to that channel of corresponding time slots of some of the frames of each superframe *(see col. 2, lines 8-27, and col. 5, lines 9-49)*.

Dent **fails to teach** and a data channel for packet switched communications is defined by the allocation to that channel of corresponding time slots of some of the frames of each superframe. **However,** ***Yung*** **teaches** a data channel for packet switched communications *(see col. 6, line 3-12)*. **It would have been obvious** to a person of ordinary skill in the art to modify ***Dent*** with ***Yung*** to enable transmitting packet data throughout network. **The motivation** for this is provided more flexibility and more reliability of transmission.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh Q. Nguyen whose telephone number is 571-272-8563. The examiner can normally be reached on M-F: 9:00 AM - 5:30 PM.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

By: Patent Examiner

Binh Q. Nguyen
09/01/2005

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